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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

MAILED

Application Number: 09/487,000
Filing Date: March 07, 2000
Appellant(s): BROCKEL ET AL.

OCT 24 2004

GROUP 1700

Daniel S. Kim
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8-18-04.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows: 1, 2, 4-10, 21 and 22.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 1, 2, 4-19, 21, 22 stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) *ClaimsAppealed*

A substantially correct copy of appealed claims 1-2, 4-19, 21 appears on pages 12-14 of the Appendix to the appellant's brief. The minor errors are as follows: claim 22 is:

Impregnated salts as claimed in claim 1, comprising at least one salt of a carboxylic acid selected from the group consisting of formic acid, acetic acid or propionic acid, which salt has been impregnated with at least one carboxylic acid selected from the group consisting of formic acid, acetic acid or propionic acid.

(9) Prior Art of Record

GB 0608975A	van Ooijen	8-04
3,600,198	GONTHIER	8-71
4,122,187	KOTANI et al.	10-78

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-19, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Ooijen (GB 0 608 975 A1) or Gonthier et al. in view of Kotani et al.

Van Ooijen discloses a composition containing an alkaline earth metal hydroxycarboxylate and a carboxylic acid which can be potassium, magnesium and calcium as in claims 1, 2 and 5 (page 2, lines 20-56 and page 3, lines 1-15). The composition is seen to be a preservative since the claimed chemicals are disclosed and would have inherently had the claimed preservative effects (claim 6). The salts can be

added to foods as in claim 16 (page 2, lines 9-20). Gonthier et al. disclose a preservative-type impregnated salt containing like acids and salts which can use a salt of magnesium (col. 1, lines 41-69) in amounts from 0.1 to 100/1 (col. 1, lines 64-73) as in claims 1, 2, 4, 5, 6). Claims 1-2, 5-6, 16 differ from the reference in the particular amount of acid in the product and in the particular particle size. The reference to Van Ooijen discloses 1-90%, preferably 40-60% hydrocarboxylic acid (page 3, lines 16-21). No patentable distinction is seen at this time in the range of 0.5 to 30% absent a showing of unexpected results. Kotani et al. disclose the use of the claimed salts and acids as in claims 1, 2, 4-7 (abstract). The salts are disclosed as being within 100 to 200 mesh, which is within the claimed size (and col. 1, lines 58-70, col. 4, lines 5-70). Therefore, it would have been obvious to use amounts within the claimed amounts as shown by van Ooijen and Gonthier and to use the particle size of Kotani et al. in the composition of Ooijen or Gonthier.

Claim 4 requires that the same carboxylic acid and the same carboxylic acid salt is required . The reference to Ooijen discloses using an alkaline earth metal carboxylate of a hydroxycarboxylic acid and another acid, which does not exclude using the same salt which would breakdown to the same acid. Therefore, it would have been obvious to use salts, which give the same acid.

Claims 7 and 14 further require the use of carriers or formulation auxiliaries and agglomerating the mixture. Kotani discloses the use of glycerin which is seen as a formulation agent (col. 1, lines 55-70). Other agents such as sugar, glycols, oil and

sucrose are disclosed (col. 1, lines 55-70). Therefore, it would have been obvious to use known formulation agents in the process of van Ooijen or Gonthier et al.

Claim 14 additionally requires that the powders are agglomerated. Kotani et al. disclose that the sorbic acids are mixed with glycerin or other additives such as glycols, lactic acid, sucrose or oil. It is not seen at this time how the powders could not have been agglomerated because otherwise they would not have stayed together. Therefore, it would have been obvious to mix the double salts with various agents and to agglomerate them.

Claim 8 further requires a protective agent which is soluble or swellable in water at 20C. The glycerin of Kotani et al. is well known to be soluble in water at 20 C. Therefore, it would have been obvious to use glycerin as a protective agent.

Claims 9, 10, and 18 require that various agents can be protective agents. Kotani et al. disclose that lactic acid and propylene glycol or ethylene glycol have been added to the double salts (col. 4, lines 25-45). Therefore, it would have been obvious to add known protective agents to the double salts.

Claim 11 requires dusting powders. The specification discloses that these salts are known and have trade names. It is seen that dusting powders are well known and here are used for their known function of keeping materials separate. Therefore, it would have been obvious to use known dusting powders for their known functions.

Claim 12 is to the method of impregnating a carboxylic acid salt with an acid to a particular concentration. Kotani et al. disclose dissolving acids in ethanol and then adding a carboxylic acid salt (col. 2, lines 43-64). As the acid is mixed with the salt, it is

seen that it is impregnated. Van Ooijen discloses that the acids can impregnate the carboxylate salt (page 3, lines 10-15). Claim 12 differs as in the composition claim in the particular amount of acid added. The discovery of an optimum value of a result effective variable is ordinarily within the skill of the art. In re Boesch, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). In developing a preservative, properties such as stability and shelf life are important. It appears that the precise ingredients as well as their proportions affect the stability and shelf life of the product, and thus are result effective variables which one of ordinary skill in the art would routinely optimize. Therefore, it would have been obvious to use amounts within the range of the reference for their known function of making an impregnated stable salt especially as the broad range has been shown.

Claim 15 further requires that the preservative is coated with a protective agent which is soluble or swellable in water at 20 C. Nothing is seen that glycerin as disclosed by Kotani is not soluble in water at 20 C. as it is a trihydroxy alcohol. Therefore, it would have been obvious to coat the preservatives with a protective coating such as glycerin as disclosed by Kotani in the process or Van Ooijen or Gonthier.

Claim 17 further requires formulation auxiliaries. Formulation auxiliaries are disclosed as being sucrose, hardened oil, glycerides and glycerin by Kotani et al. Therefore, it would have been obvious to use such to act as formulation auxiliaries as claimed.

Claim 19 further requires the use of a protective agent which is a particular acid and salt. However, the references disclose that it is known to impregnate carboxylic acids with acids in general. Nothing is seen in the specification of using particular acids except in reduction of the smell of the product (Examples). Van Ooijen in particularly discloses the use of salts of acetic and propionic acid. The reference discloses that mixing fumaric acid and an acid salt removes problems of odor and corrosivity (page 2, lines 49-55). Gallic acid is disclosed as one acid, which can be used and is within the claims (page 2, lines 45-49). Kotani et al. disclose using sorbic acid with potassium sorbate and it is disclosed that they have an irritating odor, which is mitigated with glycerin or other additives (col. 1, lines 5-6, 55-70). Gonthier discloses using propionic acid and sodium propionate, (col. 1, lines 56-70. Particular amounts of 1-90% are disclosed by Van Ooijen on page 3, lines 10-15. Therefore, it would have been obvious to make a composition containing the salts and acids as claimed as they are disclosed specifically by Gonthier, and the principles of using the acids with salts disclosed by the other references.

Claim 21 further requires that the preservatives are introduced into or placed on an item to be treated. Van Ooijen discloses that the claimed method masks the unpleasant odors of acids for ensiling. This method must shows that that the claimed compositions must be placed into the item to be treated, or the grains could not be ensiled (abstract). Gonthier discloses that fish are contacted with ice containing the salts (abstract). Therefore, it would have been obvious to introduce the preservative into the item to be treated.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over van Ooijen (GB 0608975A) in view of Kotani et al. as applied to the claims above, and further in view of Gonthier et al.

Claim 22 requires that the impregnated salts as in claim 1 contain a carboxylic acid salt, which is formic, acetic or propionic acid, which is impregnated with any of the above carboxylic acids. Gonthier et al. disclose that it is known to combine organic acids and their salts, in particular, propionic acid with sodium propionate (col. 1, lines 45-64). Even though the combinations of acids and salts are not solid as in a salt they contain the claimed ingredients. It would have been within the skill of the ordinary worker to use enough of the acids and salts to make a solid or liquid composition, because van Ooijen et al., disclose such (page 2, lines 5-15). Kotani also discloses carboxylic acids and salts (col. 1, lines 3-15). Therefore, it would have been obvious to use particular carboxylic acids and salts as disclosed by Gonthier in place of the carboxylic salts of van Ooijen et al. in view of Kotani because Gonthier discloses the particular use of certain carboxylic salts as preservatives.

(11) Response to Argument

Appellants arguments filed 8-18-04 have been fully considered but they are not persuasive. Appellants argue that impregnated salts must be produced in a particular manner. However, as in *In re Thorpe*, a product can be produced in a different manner than that claimed and a showing or arguments are required to show that the products are different. The fact that the procedures of the reference are different than that of applicant is not a sufficient reason for allowing the product-by-process claims since the

patentability of such claims is based upon the product formed and not the method by which it was produced. See *In re Thorpe* 227 USPQ 964. The burden is upon applicant to submit objective evidence to support their position as to the product-by-process claims. See *Ex parte Jungfer* 18 USPQ 2D 1796.

As to the limitation as to impregnation, that a liquid is introduced into a solid crystalline structure of a salt, this is disclosed by van Ooijen. The reference discloses distinctly that "if the aliphatic carboxylic acid is a liquid, this liquid can be used to impregnate the solid calcium carboxylate of the hydroxycarboxylic acid". (underlining added) (page 3, lines 16-21). Even if the reference states that the acid is mixed with the salt, it is not seen how the salt could not have been impregnated, since the acid is liquid (page 3, lines 44 and 45).

As to Kotani a "sorbic acid-potassium sorbate double salt" is disclosed (col. 2, lines 43-64, col. 4, lines 50-70). Certainly, a different method is used to impregnate the salts as disclosed by heating sorbic acid with ethanol and adding to the salts. Even a co-crystalline structure of two solids, as intimately mixed fulfills the impregnation requirement, even if it goes beyond it to make a crystalline structure. Appellants specification discloses that they also produce a crystalline solid, i. e. "After impregnation, the mixer contains a free-flowing carboxylic acid salt in the form of a crystalline solid" (page 8, lines 11-15).

Appellants argue as to amounts in van Ooijen. However, van Ooijen is not limited to particular amounts as discussed by Appellant. Even if van Ooijen does not disclose Appellants' claimed amounts per se, he must know how to produce a solid,

which does not produce unpleasant odors as a powder is formed which would also have been free-flowing as are Appellants' products (abstract and page 2, lines 14 and 15, page 10, lines 40-41).

As to Van Ooijen et al., Appellant does not exclude the use of alkaline earth metals and Appellants' specification discloses on page 3, lines 29-31 that they can be used.

Appellant argues that when the proportion of carboxylic acid is higher or lower than 40-60% that the effectiveness and efficiency of release of the hydroxycarboxylic acid is lowered and there is no motivation to use the claimed amounts of from 0.5 to 30%. However, the reference to van Ooijen discloses amounts from 1-90% and a powder or granules can be made (page 3, lines 16-25) and Appellants are making a free flowing carboxylic acid salt in the form of a crystalline solid (page 8, lines 11-15). No patentable difference is seen in the two products.

Appellants argue that van Ooijen does not disclose any specific particle size. However, this reference is used in combination with Kotani et al. who does show a particle size.

Appellants argue that Gonthier et al. does not teach the claimed invention. It is not seen how the claimed invention is not disclosed by "adding acids to their corresponding salts of alkali metals (page 8, 1st para. of arguments) even though the mixture is found in ice or an aqueous solution.

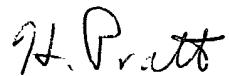
Appellants ask for extrinsic evidence to show the existence of an impregnated carboxylate salt. However, the Patent Office is not equipped to make such a showing

and Appellant is. Certainly the various mixtures of acids and salts indicate a solid impregnated salt because acids are mixed with salts (col. 1, lines 56-73). The reference states that the "active mixture is incorporated in the ice" (col. 2, lines 10-13) and "the additive is introduced into water", col. 2, lines 33-35).

Appellants ask for further evidence that the double salts of Kotani are the same as theirs. As above, they are produced by a different method, but enough similarities exist to make them the same. In addition, it is the Appellants' burden, to show that the compounds are not the same once the Patent Office has presented its position (*In re Thrope, supra.*

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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October 13, 2004

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